

WEST Search History

DATE: Monday, March 13, 2006

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| | | <i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ</i> | |
| <input type="checkbox"/> | L5 | (method\$5 or process or produc\$5) same L4 | 23 |
| <input type="checkbox"/> | L4 | (human or (homo with sapien\$5))same L3 | 39 |
| <input type="checkbox"/> | L3 | (clon\$5 or express\$5 or recombinant)same L2 | 151 |
| <input type="checkbox"/> | L2 | (gene or sequence or polynucleotide) same L1 | 310 |
| <input type="checkbox"/> | L1 | (3-beta-galactosyltransferase? or galactosyltransferase? or (galactose with transferase?)) | 562 |

END OF SEARCH HISTORY

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NiceZyme View of ENZYME: EC 2.4.1.122

Official Name

Glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase.

Reaction catalysed

UDP-galactose + glycoprotein N-acetyl-D-galactosamine \rightleftharpoons UDP + glycoprotein D-galactosyl-1,3-N-acetyl-D-galactosamine

Comment(s)

The non-reducing O-serine-linked N-acetylgalactosamine residues in mucin glycoproteins can act as acceptors.

Cross-references

| | |
|---|---------------------------------------|
| BRENDA | 2.4.1.122 |
| PUMA2 | 2.4.1.122 |
| PRIAM enzyme-specific profiles | 2.4.1.122 |
| Kyoto University LIGAND chemical database | 2.4.1.122 |
| IUBMB Enzyme Nomenclature | 2.4.1.122 |
| IntEnz | 2.4.1.122 |
| MEDLINE | Find literature relating to 2.4.1.122 |
| MetaCyc | 2.4.1.122 |

View entry in original ENZYME format

All ENZYME / UniProtKB/Swiss-Prot entries corresponding to 2.4.1.-

All ENZYME / UniProtKB/Swiss-Prot entries corresponding to 2.4.-.-

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ENZYME: 2.4.1.122

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Entry EC 2.4.1.122 Enzyme

Name glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase;
uridine diphosphogalactose-mucin beta-(1->3)-galactosyltransferase

Class Transferases
Glycosyltransferases
Hexosyltransferases

Sysname UDP-galactose:glycoprotein-N-acetyl-D-galactosamine
3-beta-D-galactosyltransferase

Reaction UDP-galactose + glycoprotein N-acetyl-D-galactosamine = UDP +
glycoprotein D-galactosyl-1,3-N-acetyl-D-galactosamine
[RN:R05908]

Substrate UDPgalactose [CPD:C00052]
glycoprotein N-acetyl-D-galactosamine

Product UDP [CPD:C00015]
glycoprotein D-galactosyl-1,3-N-acetyl-D-galactosamine [CPD:C04750]

Comment The non-reducing O-serine-linked N-acetylgalactosamine residues in
mucin glycoproteins can act as acceptors.

Pathway PATH: map00512 O-Glycan biosynthesis
PATH: map01030 Glycan structures - biosynthesis 1

Ortholog KO: K00731 glycoprotein-N-acetylgalactosamine
3-beta-galactosyltransferase

Genes HSA: 56913 (C1GALT1)
MMU: 94192 (C1galt1)
RNO: 65044 (C1galt1)

Reference 1 [PMID:6789880]
Hesford FJ, Berger EG, Van den Eijnden DH.
Identification of the product formed by human erythrocyte
galactosyltransferase.
Biochim. Biophys. Acta. 659 (1981) 302-11.
2 [PMID:6801057]
Mendicino J, Sivakami S, Davila M, Chandrasekaran EV.
Purification and properties of UDP-gal:N-acetylgalactosaminide
mucin: beta 1,3-galactosyltransferase from swine trachea mucosa.
J. Biol. Chem. 257 (1982) 3987-94.
3 [PMID:6366476]
Schachter H, Narasimhan S, Gleeson P, Vella G.
Glycosyltransferases involved in elongation of N-glycosidically
linked oligosaccharides of the complex or N-acetylactosamine type.
Methods. Enzymol. 98 (1983) 98-134.

Other DBs IUBMB Enzyme Nomenclature: 2.4.1.122
ExPASy - ENZYME nomenclature database: 2.4.1.122
ERGO genome analysis and discovery system: 2.4.1.122
BRENDA, the Enzyme Database: 2.4.1.122
CAS: 97089-61-7

LinkDB [All DBs](#)

=> Original format